

SILICON RECTIFIERS

12 & 16 Ampere Silicon Power Diodes

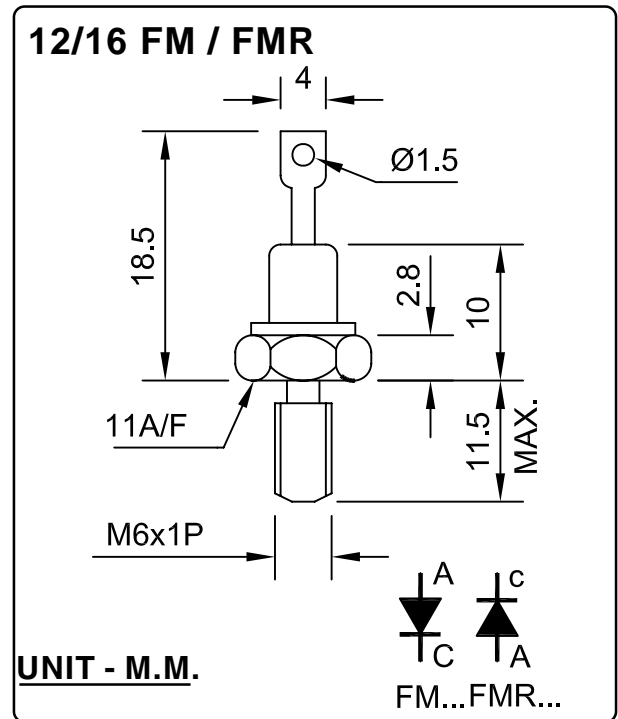
FEATURES

- ❖ All diffused series.
- ❖ Available in normal & reverse polarity.
- ❖ Device conforms to IS 3700 (III) & IS 4400 (III).
- ❖ Device outline conforms to IS 5000 (Do. 4) except stud.
- ❖ Available in avalanche characteristic.

ELECTRICAL SPECIFICATIONS		12 FM/FMR	16 FM/FMR
$I_{F(AV)}$	Maximum average forward current $T_c = 160^\circ\text{C}$	12A	16A
V_{FM}	Maximum peak forward voltage drop @ Rated $I_{F(peak)}$	1.3 V	1.2 V
I_{FSM}	Maximum peak one cycle (non-rep.) surge current 10 msec	265 A	350 A
I_{FRM}	Maximum repetitive peak forward current	60 A	80 A
I^2t	Max. I^2t rating (non-rep.) for 10 msec.	351 A ² Sec	612 A ² Sec

THERMAL MECHANICAL SPECIFICATIONS

θ_{J-C}	Maximum thermal resistance junction to case	2° C/W	1.6° C/W
θ_{C-H}	Contact thermal resistance	0.5° C/W	
T_J	Operating junction temp.	-65°C to 175°C	
T_{stg}	Storage temperature	-65°C to 200°C	
	Mounting torque (Non-lubricated threads)	0.14 M-Kg min. 0.17 M-Kg max.	
W	Approx. weight	7 gms.	



AVALANCHE RATING : Avalanche versions available with 100,120,140 the reverse power rating only, to specify add prefix 'A' e.g. A 12 FMR 120 etc.

N. B. : All other Parameters are the same as 12 F & 16 F

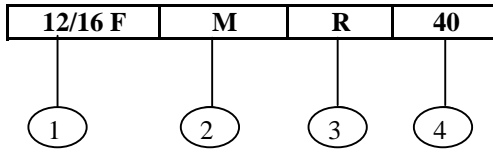
		A 12F...	A16F...	UNITS	CONDITIONS
P_R	Maximum non-repitive peak reverse power	7	15	KW	10 μ S Square pulse

ELECTRICAL RATINGS

TYPE	NUMBER	12 FM/FMR 16 FM/FMR	10	20	40	60	80	100	120	140	160
V_{RRM}	Max. repetitive peak reverse voltage (V)		100	200	400	600	800	1000	1200	1400	1600
V_{RSM}	Max. non-repetitive peak reverse voltage (V)		150	300	500	700	900	1100	1300	1500	1700
$V_{R(RMS)}$	Max. R.M.S. reverse voltage (V)		70	140	280	420	560	700	840	980	1120
V_R	Max. D.C. Blocking voltage (V)		100	200	400	600	800	1000	1200	1400	1600
	Recommended R.M.S. working voltage (V)		40	80	160	240	320	400	480	560	640
I_{RM}	Max. Peak reverse leakage current @ V_{RRM}, T_c (mA)		1	1	1	1	1	1	1	1	1

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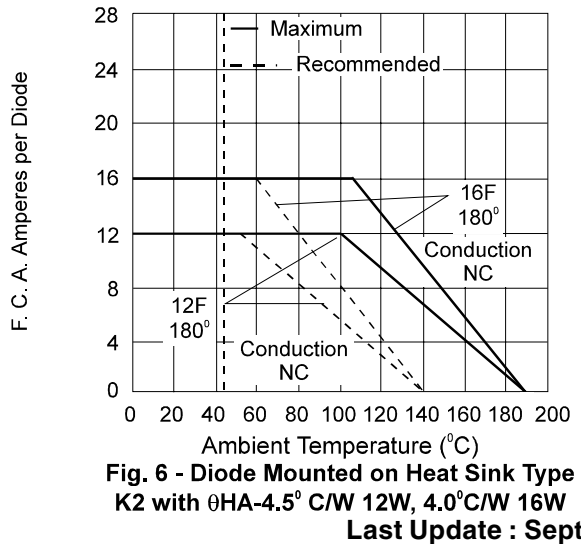
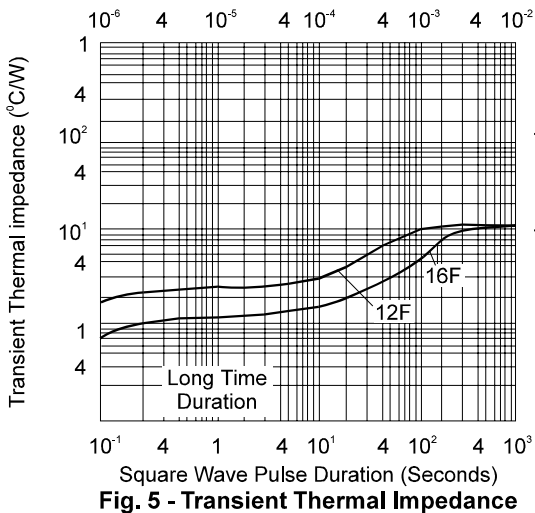
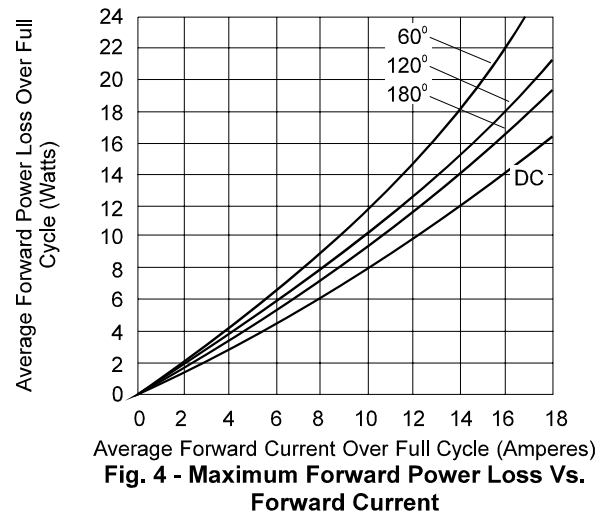
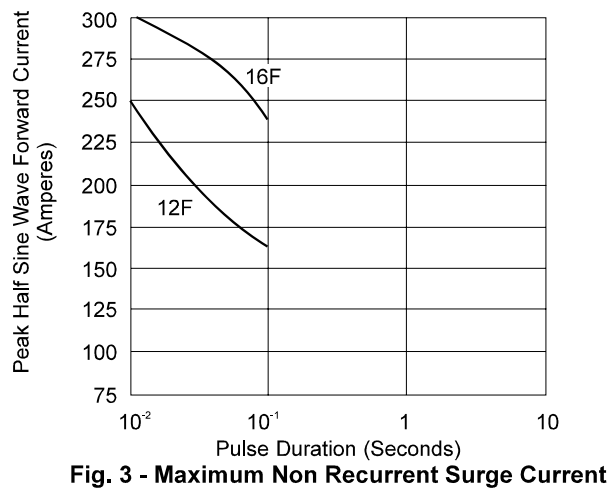
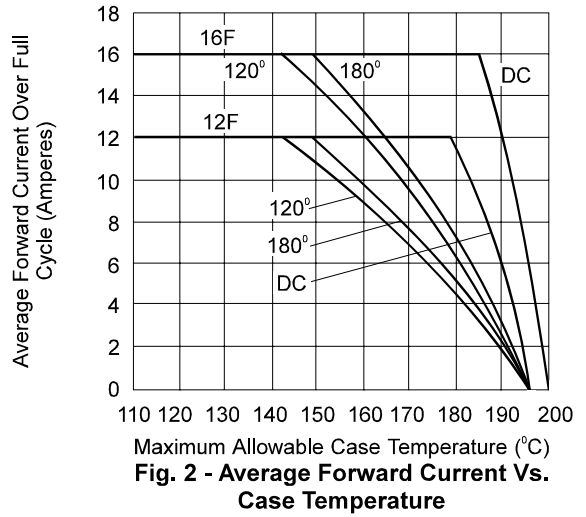
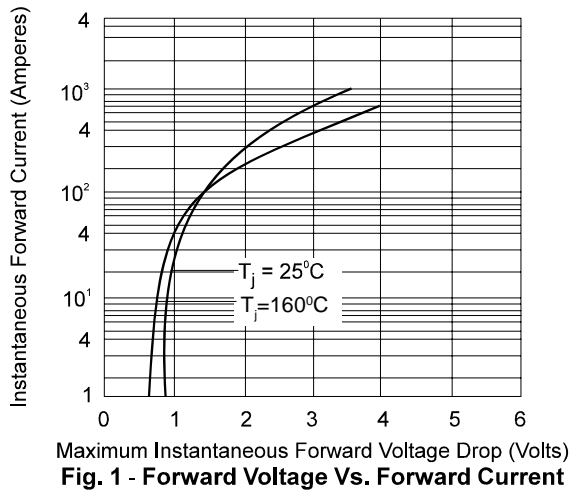
Order Information Table



- | | | | |
|----------|---|-----------------------------|--------------------------------|
| 1 | - | 12/16F - | Essential Part No. |
| 2 | - | M - | Stud with 6mm Metric threading |
| | | None - | Stud with 10-32 UNF threading |
| 3 | - | None- | Normal polarity |
| | | R - | Reverse polarity |
| 4 | - | Voltage Rating (See table) | |

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12 FM / FMR & 16 FM / FMR SERIES



Last Update : Sept. 2007